- D R A F T -
For Discussion
Purposes Only

California Department of Pesticide Regulation

Government Information Portals and Service Delivery Websites

Leading Practices

November 21, 2000

NewPoint Group®
Management Consultants

Table of Contents

Executive Overview

A number of governmental agencies are using the Internet to deliver information and services to citizens. In this report, we identify examples of websites that are putting a wide range of materials, from publications and databases to actual government services, online for use by citizens, suppliers, business partners, and employees. These sites were selected as representative of innovative efforts found in a brief survey of websites. These sites provide examples of how processes similar to those at the California Department of Pesticide Regulation (DPR) could be put online, such as licensing, certification, registration, testing, and progress tracking. This paper provides a brief overview of the function, unique features, benefits, web address, and sample screens of these websites. In conducting this survey, we reviewed over 30 websites from 13 states, one county, and several federal agencies. We selected the sites because they were identified as leaders in leveraging Internet technology to provide information and services.

We have organized descriptions of the websites into eight categories:

- Online license and permit applications, renewal, and/or purchase
- Online query for permit or project status
- Online courses and exams
- Website service portals
- Regulatory submissions on CD-ROM
- Database queries and online resource directories
- Personalized state web pages
- Information kiosks

Most of the sites identified in this document are not pesticide-related sites. However, many of the processes are similar to DPR processes. The list below shows how the types of functions and processes described in this report could be applied to DPR processes. This list is for illustrative purposes only.

- License and certification renewals online, including payment and verification of continuing education coursework
- Easy-to-search databases to identify continuing education classes, applicators, trainers, instructors, etc.
- Tracking system to track the registration process
- Online submittal and automatic population of a database for pesticide use reports and pesticide illness reports
- Map and database system to show pesticide use, illnesses, location of CACs, etc.
- Use of CD-ROM submissions for the pesticide registration process, including online review of applications and increased synchronization with U.S. EPA's electronic process
- Continuing education through online coursework
- Computerized pesticide applicator testing taken at computer centers or CACs
- Computer kiosks at CAC offices and other locations to allow users access to information, online certification, completion of reports online, etc.

Executive Overview *(continued)*

Leading Practices in E-Government Services
Summary of Sites and Services

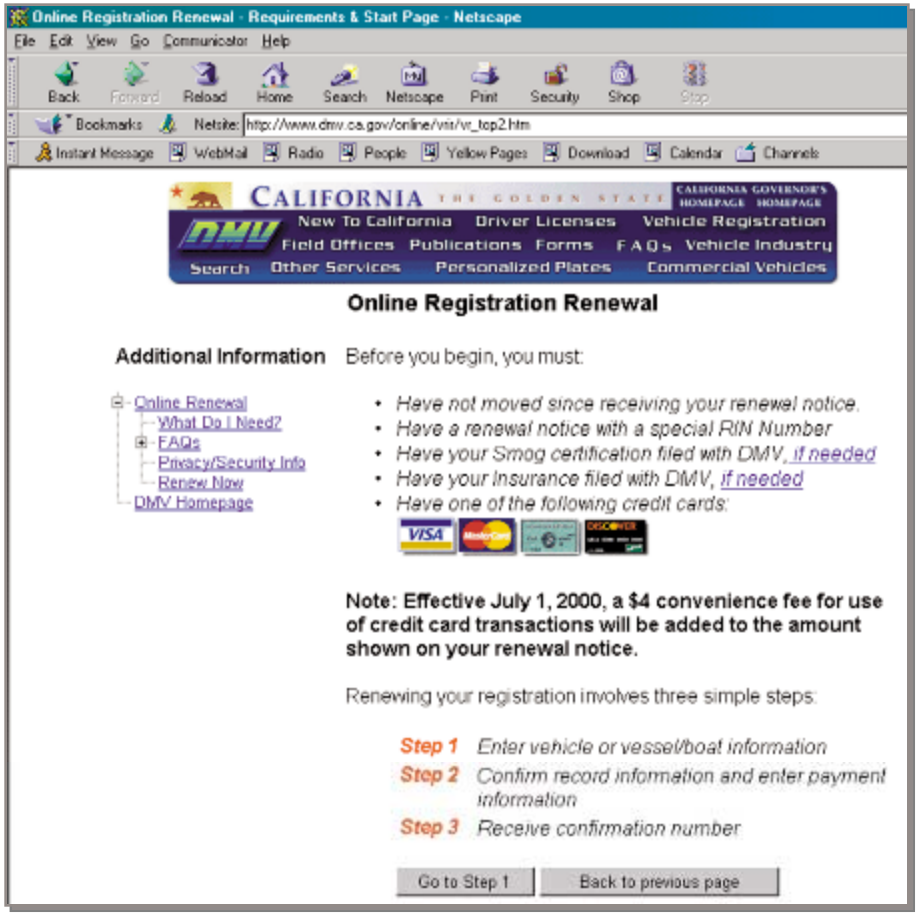
Agency *Service*	*Web Address*	*Submit forms online*	*Make payments online*	*Query a database*	*Take a class*	*Take a test*	*Customize a website*	*Submit application on CD-ROM*
State of California: Department of Motor Vehicles *Vehicle Registration Renewal*	http://www.dmv.ca.gov/online/vrir/vr_top2.htm	✓	✓					
State of Washington, State of Georgia, State of Utah *Hunting, Fishing, Boating Licenses*	http://www.permit.com/index-home.html https://secure.e-utah.org/serv/hflonline http://www.parks.wa.gov/moorage/default.asp	✓	✓					
State of Washington: Employment Security Department *Unemployment Application*	http://www.go2ui.com	✓						
Health Canada: Pest Management Regulatory Agency *Pesticide Registration*	http://www.hc-sc.gc.ca/pmra-arla/english/MenuPages/MainMenu_IE.html							✓
United States Food and Drug Administration: Center for Drug Evaluation and Research *New Drug Applications*	www.fda.gov/cder/regulatory/ersr/default.htm							✓
United States Environmental Protection Agency *Pesticide Registration Pilot Program*	www.epa.gov/oppfead1/edsgoals.htm							✓
State of Florida: Department of Environmental Protection *Permit Status*	http://www.dep.state.fl.us/bisweb/permit			✓				
State of California: Division of the State Architect *Project Tracking*	http://www.dsa.ca.gov/tracker			✓				
University of California: Statewide Integrated Pest Management Project *Pesticide Use Reports*	http://www.ipm.ucdavis.edu/PUSE/puse1.html			✓				
State of Washington: Department of Ecology *Facility/Site Identification*	http://www.ecy.wa.gov/services/as/iss/fsweb/fshome.html			✓				
State of Minnesota: Department of Agriculture *Risk Management Education Providers*	http://www.mda.state.mn.us/risksurvey			✓				
State of Pennsylvania: Technology Atlas *Technology Mapping*	http://www.oit.state.pa.us/atlas/default.htm			✓				
State of California: Department of Personnel State Training Center *Training Center Courses*	http://www.dpa.ca.gov/tcid/stc/virtual/virtual1.shtm				✓			
State of California: Cooperative Personnel Services (CPS) Examination Services *Examination Services*	http://www.cps.ca.gov					✓		
State of Virginia: Department of Agriculture and Consumer Services *Pesticide Applicator Testing*	http://www.vipnet.org/ccc/best_practices/search.cgi?QueryText=Pesticide&submit=Search					✓		
PestNetwork.com *Continuing Education*	http://www.pestnetwork.com		✓		✓			
State of Virginia *Customized Home Page*	http://www.vipnet.org/vipnet/myvahomepage/cgi-bin/myvahomepage.cgi						✓	
States of California, Georgia, Massachusetts, Texas, Washington, Utah, Virginia, and U.S. Federal Government *Government Portals*	http://www.state.ca.us http://www.state.ga.us/index/ECGeorgia.html http://www.state.ma.us http://www.texasonline.state.tx.us http://www.access.wa.gov http://www.state.ut.us http://www.vipnet.org/vipnet/index.html http://www.firstgov.gov	✓	✓	✓				
Fairfax County, Virginia *Information Kiosks*	http://www.co.fairfax.va.us/gov/dit/kiosk.htm	✓	✓	✓				

Online license and permit applications, renewal, and/or purchase

This section provides examples of websites that allow the user to complete an online application form, electronically submit information and payment, and receive a license, renewal, or similar service. States use similar online submittal systems for a number of functions. Typically, these systems involve: (1) populating and submitting online forms, (2) automatically processing the returned form, and (3) automatically sending back a response to the user on their PC. Often, the user verifies information on the form by agreeing to a certification statement when they submit the form - in place of an actual signature. This section illustrates the wide range of programs that are utilizing online form submittals and payments.

State of California: Department of Motor Vehicles
http://www.dmv.ca.gov/online/vrir/vr_top2.htm

- The DMV recently began a program to allow online vehicle registration renewals. The program was initiated in April 2000. As of November 2, 2000, approximately 100,000 vehicle owners had used the system. Ninety-five percent of those responding give the site a favorable rating.
- Currently, only those vehicles that are insured by one of four companies are able to use the online system.
- The four insurance companies electronically file insurance coverage information to DMV, allowing DMV to instantly verify coverage without the driver submitting a paper copy of the proof of coverage.
- The secure system allows for credit card payment.
- DMV mails the registration tags within 2 working days of receiving the transaction.



Online license and permit applications, renewal, and/or purchase *(continued)*

States of Washington, Georgia, and Utah: Hunting, Fishing, and Boating Licenses

- Several states, including Washington, Georgia, and Utah, allow citizens to purchase hunting, fishing, and/or boating licenses online.

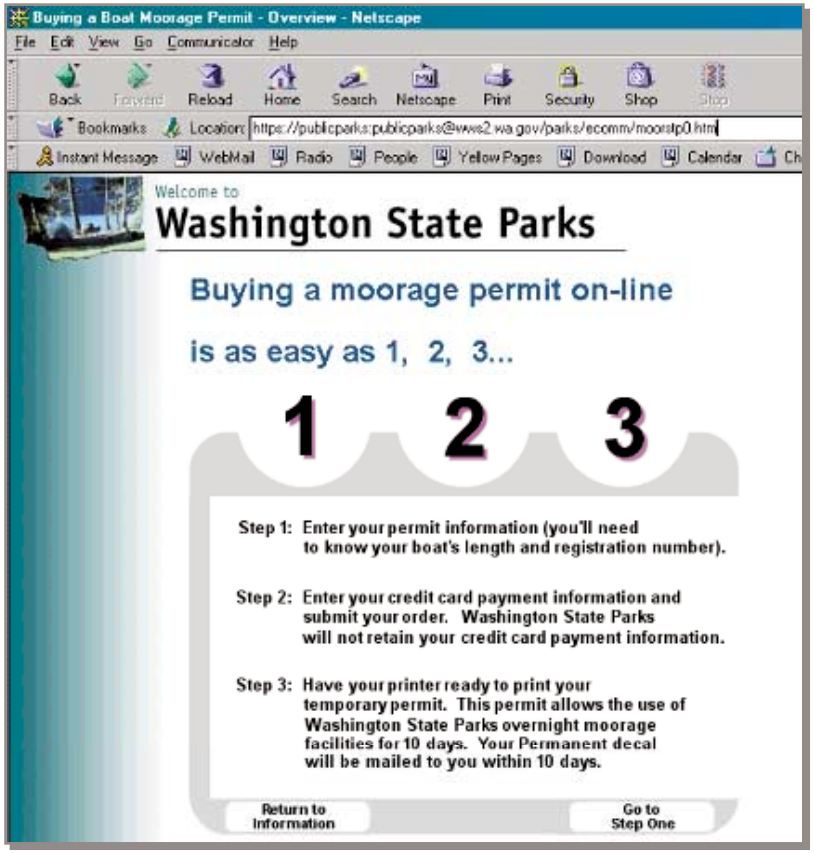
- The Washington State Parks moorage permit site allows the user to submit boat and payment information. The user is immediately e-mailed a temporary permit which they print. This temporary permit is valid for 10 days, until the state mails the permanent decal.

- Washington uses CyberSource for the credit card portion of the transaction. The state does not see or store credit card information.

- The user receives a temporary permit and transaction code. There is a validation code within the transaction code that allows officials at the parks to verify that the permit is valid and to protect against fraud.

- The system uses a SQL database behind the firewall and MS Access at the front end. Front page code is while HTML, the rest is written in ASP and Visual Basic.

- On a straight cost-benefit basis, this permit system would take three years to break even. However, the state views the system as a good test for online permits, and the system provides access and information on boating in the state that has broader benefits.
  http://www.parks.wa.gov/moorage/default.asp



- The Utah Wildlife Resources site allows the user to choose from fifteen different types of seasonal and short-term hunting and fishing licenses. Like the other systems, the user submits the form and payment online.
  https://secure.e-utah.org/serv/hflonline

Online license and permit applications, renewal, and/or purchase *(continued)*

- The Georgia Wildlife Resources site allows the user to choose between hunting, fishing, or boating licenses, and then submit the information and payment online.
  http://www.permit.com/index-home.html

State of Washington: Employment Security Department
http://www.go2ui.com

- Washington has a site that allows citizens to apply for unemployment benefits online. The first page of the site is a private domain. However, once you move past the first page, the site links to a government URL. The complex form has several screens of instructions and 8 pages (when printed out) of forms, which can take up to an hour to complete.
- By submitting the form online the user agrees to six conditions, including a statement that the information provided is accurate. The applicant is then mailed an "Unemployment Claims Kit and Job Search Guide".

Regulatory submissions on CD-ROM

Health Canada: Pest Management Regulatory Agency
http://www.hc-sc.gc.ca/pmra-arla/english/MenuPages/MainMenu_IE.html

- As part of a program to reduce the cost of reviewing applications by 40 percent, Canada's PMRA has been pilot-testing electronic submissions since 1996, using a standard format that provides an electronic link between reviewers and industry.
- In 1999, the PMRA received its first electronic submission in an interactive review format on a product registration.
- The system is being developed in collaboration with the European Union and U.S. EPA to ensure international capability and consistency.
- The procedures followed are similar to those for the Center for Drug Evaluation and Research (see page 7), and electronic submissions are placed on a secure local area network infrastructure with several layers of security and access rights.
- The PMRA has conducted testing and evaluation of the system, working closely with industry. An objective is to save time and improve the quality of the review. No performance data is available yet.
- One pilot, a submission by Bayer, achieved a 23 percent gain in efficiency as compared to a paper submission. The primary benefit is improved efficiency throughout the registration process.
- To reduce or avoid implementation problems, the PMRA has emphasized up-front efforts on training, discussing, preparing for the cultural change, and developing new processes.
- The PMRA is hoping to develop a system with open standards that will allow industry flexibility in preparing electronic documents. They require WordPerfect 7.0 for text documents, and are examining web-based and CADDY systems for datasets. Next steps include getting more e-submissions, testing and feedback to industry, and making improvements based on feedback. The PRMA also is piloting e-signatures with two industry technical committees.

Regulatory submissions on CD-ROM *(continued)*

United States Food and Drug Administration: Center for Drug Evaluation and Research
http://www.fda.gov/cder/regulatory/ersr/default.htm

- In January 1999, the Center for Drug Evaluation and Research (CDER) and the Center for Biologic Evaluation and Research (CBER) jointly developed guidance documents for *Providing Regulatory Submissions in Electronic Format*. These provide guidelines for several submissions, including new drug applications (NDAs).

- The NDA submission requires an extremely large volume of documentation, including many thousands of pages of studies, research, and data. All or some of the submission may be made electronically, following the guidelines. The guidelines specify that submissions be either on CD-ROM or tape. All submissions over 5 CDs (approximately 3,000 megabytes) are required to be on magnetic tape.

- The CDER requires that most of the documentation be provided in PDF (Portable Document Format) form, although in a format that will allow the reviewer to print, select, copy, and paste text.

- Datasets, which are analyzed by the CDER, are provided in SAS System XPORT. As a result, the reviewer can more easily manipulate the data and conduct analyses on the datasets as part of the review process. The data are not incorporated into a larger database, but are maintained separately.

- The CDER requires only one electronic copy to be submitted. Staff then copy the files to tape to create an archival copy, and also copy the files to the network server to create a read-only copy for the reviewer. The reviewer can download or cut-and-paste segments of the electronic copy to include in their review document. The CDER is experimenting with techniques to make reviewing easier. Many reviewers use a two-monitor set-up, with the NDA on one monitor and a staff's review document on the other, and toggle between them.

- The CDER is evaluating the use of electronic signatures. Currently any pages on the NDA that require a signature must be submitted on paper. For some other types of reports, the CDER is considering exchange keys, personal identification numbers (PINs), or passwords for electronic signatures.

- The program is voluntary, although the CDER is moving towards requiring electronic submissions, and providing for material to be submitted via the Internet, rather than CD-ROM or tape.

- Currently, the CDER allows drug companies to submit online post-marketing adverse event reports. The CDER receives thousands of these reports each year, which are submitted by a drug company each time a patient suffers an adverse effect from a drug. The new system allows the drug company to complete and submit the form to the CDER online, where it directly populates a database. The CDER staff can analyze these reports directly from the database.

United States Food and Drug Administration: Center for Drug Evaluation and Research *(continued)*

- The program has been well accepted by industry. Most of the larger drug companies are using the electronic submission process for all or part of their NDAs. Education and training of both the staff and industry has been important to ensure that users are following the guidance documents.
- The CDER has only anecdotal information on benefits. For example, a CDER reviewer recently had to go back and compare data from two different applications, one electronic and one on paper. It took them a few weeks to analyze the paper application, and a few days to analyze the electronic application. Paper use dropped by 20 percent when the program first started, and is currently down by 50 percent. The new system allows reviewers to work offsite (e.g., at home), and access the information from any PC with a browser. Employees find it much easier to archive and retrieve files.

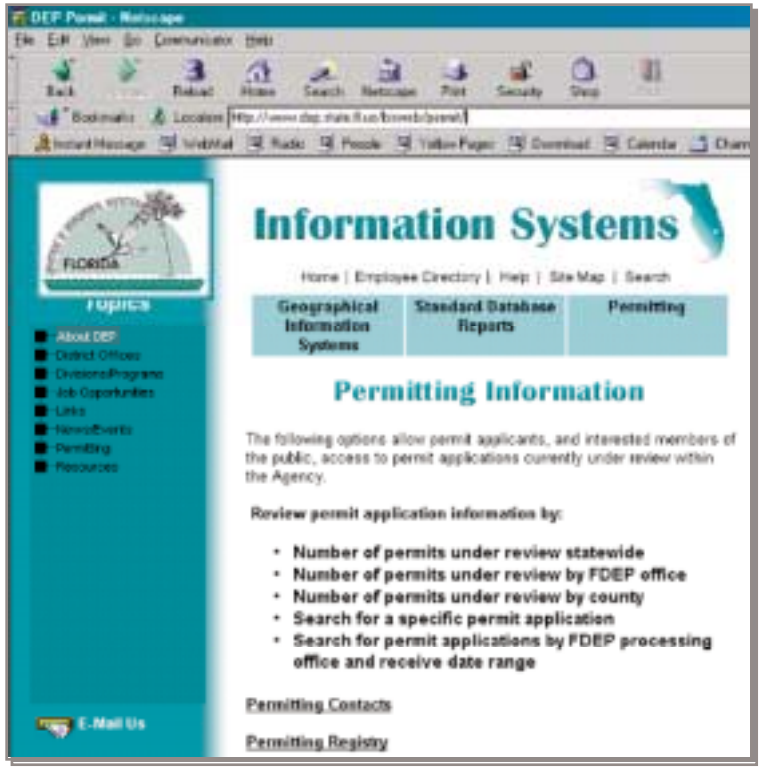
United States Environmental Protection Agency: Office of Pesticide Programs
http://www.epa.gov/oppfead1/edsgoals.htm

- In September 1999, the OPP created a work group to establish a process for accepting and reviewing electronic data submissions for registering new pesticides.
- EPA is working with the American Crop Protection Association and Health Canada (see above), and has followed many of the guidelines established by the CDER (also see above) to develop draft guidelines and a pilot project.
- Like the CDER, the OPP is requesting that applicants provide submissions on CD-ROMs in PDF format. The OPP is developing guidelines for data submission. However, OPP reviewers now download portions of the submission (for example, data tables) into another program for analyses. Currently, the applicant submits both a paper copy and an electronic copy.
- The OPP is planning to test the process over the next two years, and hopes that by the end of 2001 any registrant will be able to submit an electronic version of their pesticide application and that reviewers will require only the electronic version for review.
- Until the OPP develops guidelines and a procedure for electronic signatures, they require that the applicant complete and sign a sheet that certifies the electronic data integrity.
- The U.S. EPA hopes that the program will facilitate information handling and reviews, improve information archiving, allow for more integrated submissions, enhance communications between industry and government, develop a uniform technology standard, and foster the development of international electronic data submission standards.

Online query of permit or project status

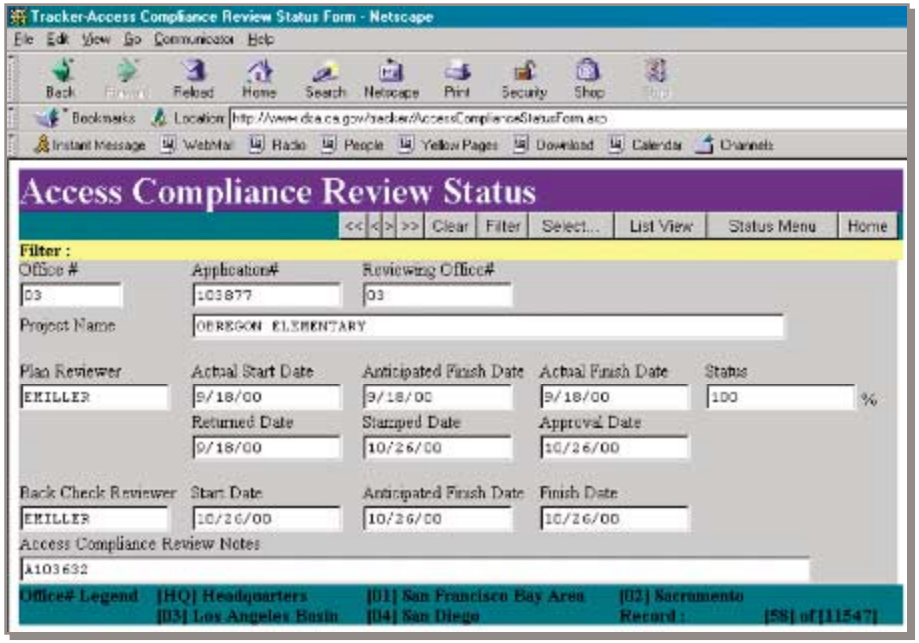
State of Florida: Department of Environmental Protection
http://www.dep.state.fl.us/bisweb/permit

- The State of Florida's Department of Environmental Protection's (FDEP) one-stop permit registry (OSPREY) has a function that allows the user to check the status of any environmental permit.
- There are five ways to search the information: permit type, FDEP office, county, application number, and date of application. The search generates a list of permits, by permit number. The permit number links to a screen with the applicant name, company, site name, FDEP office, application number, date application was received, and current processing status.
- The current processing status field provides an up-to-date description of the permit status. While this is a useful feature, the site does not provide information on the expected approval date, or contact information for the state employee(s) processing that application.
- The first phase of the OSPREY system has been in place for one year. Currently, users can access information on permit status and permit requirements, but cannot submit information to the FDEP. Public use of the site has been very limited, and the FDEP has not done any marketing or advertising of the service. Thus, many individuals and organizations that are directly involved in the permit process do not use or even know about the site. The agency hopes this will change with the roll-out of the second phase of the system.
- By the end of this year, the FDEP will have the first three (out of more than forty) permit applications available online. This new feature will allow users to complete and submit permit applications, including credit card payment, online. FDEP is not reengineering or streamlining the permit process as part of this initiative, although they may do so at a later date.
- The new OSPREY system will draw from at least two legacy databases, the financial database, and the agency-wide permit information database. Security is an issue due to the e-commerce component of the new system. In addition, there are concerns that the databases could be subject to modification, thus, to prevent this, a portion of the system will reside behind the agency's firewall.



Online query of permit or project status *(continued)*

State of California: Division of the State Architect
http://www.dsa.ca.gov/tracker/



- The Division of the State Architect within the Department of General Services has a project tracking system for construction projects. The program allows the user to track the project through the plan review phases.
- The project was developed internally in 1997, and went live on the web in 1998.
- The primary users are architects, engineers, and school district employees, although the site can also be accessed by the public.
- The site allows the user to search by any of twenty fields, including review office, name, date of application, and project type.
- A scheduling screen provides the anticipated date for the start of plan review for each of four areas.
- There are four separate searches for the four plan review types: Access Compliance, Fire & Life Safety, Structural Safety, and Field Review. The user can search for a project and display a screen with the date the plan review started, anticipated completion date, actual completion date (if complete), the date plans were returned to the design professional, and the name of the DSA plan reviewer.
- When a plan comes to their office, the DSA assigns a project identification number and a supervisor reviews the plan to determine the degree of complexity. The supervisor also assigns the plan to a staff person and determines the anticipated start date. After the staff person reviews the plan, it is sent back to the school district architect and continues through the next steps of the review and inspection process. The staff person updates the tracker system to reflect the current status of the review.

Online query of permit or project status *(continued)*

State of California: Division of the State Architect *(continued)*

- All the information in the system is public information except for some rating/ranking. This information is not available online, and there are ad-hoc performance measurement reports that are only available to staff. There are passwords and varying levels of access to the system so that staff does not mistakenly fill in dates for the wrong set of plans.

- The system is on a SQL database. There is a server in each of the four area offices, and a fifth in the headquarters office.

- The initial system was designed overseas, and was not as user-friendly as it might be. The State Architect is updating and improving the system, and just put one set of improvements online.

- The State Architect emphasizes to employees that they must update the plan status as quickly as they can. This ensures that project status information on the system stays up-to-date.

- A primary objective of the system is to improve information on the school plan review status. Because the DSA is the gatekeeper for school construction dollars, they often became the focal point if a plan was delayed, even if the architect or some other party causes the delay. Because all information pertaining to the plan and its target dates are online, it is easy to see the reason for any delays. The system also reduces phone calls asking for the status of projects.

Database queries and online resource directories

Several agencies provide online access to databases and these sites may serve as examples for the DPR. The level of complexity of online database systems varies significantly, from simple searches to complex downloads of GIS information. Below, we discuss several examples that are functional, fairly simple, and allow user-friendly retrieval of reports.

University of California: Statewide Integrated Pest Management Project
http://www.ipm.ucdavis.edu/PUSE/puse1.html

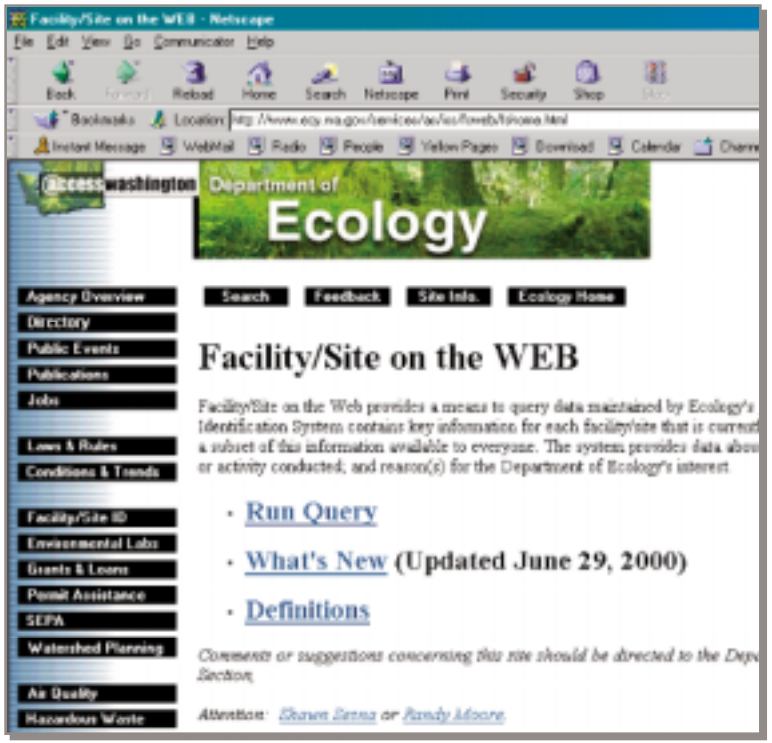
- The University obtains data from the Department of Pesticide Regulation (DPR) to create the pesticide use summaries database. This database includes summaries of pesticide use by site (i.e. crop), pesticide, county, and month. It is current through 1998. Data from more recent years will be added as they become available.
- The user submits a query to the database. After a few seconds or hours, depending on the number of records required to fulfill the query, the user receives an email with links to a compressed file with their data report. The user can download the file, and can either view it or paste it into a word processing program.
- The system is not as easy to use as those that generate an on-screen report immediately, but given the complexity of the information being requested, it provides relatively easy access to customized information on pesticide use.

State of Washington: Department of Ecology
http://www.ecy.wa.gov/services/as/iss/fsweb/fshome.html

- The Department of Ecology (DOE) is developing an integrated database system for their divisions and programs. The first phase is the facility/site identification system.
- The database draws on information from 25 legacy systems within the Department of Ecology.
- The site includes all locations in the state that are of interest to the DOE because of contamination, pollution releases, spills, hazardous waste generation, etc. Sites can be searched by a number of descriptive fields, including facility or site name, ID number, geographic locator, standard industrial classification (SIC) code, or type of interaction with Ecology (i.e. which program). The geographic search is further narrowed down to county, city, zip code, legislative district, congressional district, or latitude/longitude.
- The program generates a list of all sites that fit the specified query. The user can click on the ID number listed for each site to get a screen with details such as the location and environmental problems at the site.
- Primary users of the system are regulated facilities that are interested in each other, the public, and the U.S. EPA. The DOE also uses an internal version of the system.

Database queries and online resource directories *(continued)*

State of Washington: Department of Ecology *(continued)*



- The system's database platform is Sybase, and includes agency-wide information. All participating programs provide site data into the system, and the system reconciles and validates this data.
- The public system is a Microsoft SQL system using JavaScript.
- Individual programs within the Department populate the SQL database. Any data in the subsidiary systems that are earmarked for the agency database are automatically pushed to the Sybase system. This update happens on a regular schedule (either nightly or weekly). Doing so allows the individual programs to maintain and use their own systems, and provides a mechanism to draw out the common data needed agency-wide.
- Implementation of the system has required a cultural shift within the agency from "this is my data" to "this is our data." Currently, the air and waste groups are providing data into the system. The water quality group, which has many relevant sites, has been reluctant to provide data to the system. After four years of development, the agency believes that the water quality group will be on board soon. Peer pressure has helped, as the other Department programs are pushing the water quality group to participate.
- Internally, those groups that are on board see the value of drawing cross-media information from the system, while those not on board have not acknowledged the value.
- External groups have provided much positive feedback to the system.
- The Department recommends that the person managing the project have both a business and a technical background, with a broad understanding of the business needs. Data standards are crucial, as is user involvement. The Department has focused on the value the system will provide to the user, and allowed the users to help design the system.
- Four years ago when the system was developed, there were not well-established web tools as there are today. The Department used Cool Jen from Texas Instruments. If DOE started over today, they would use a web-based system. The Department may upgrade in the next few years.

Database queries and online resource directories *(continued)*

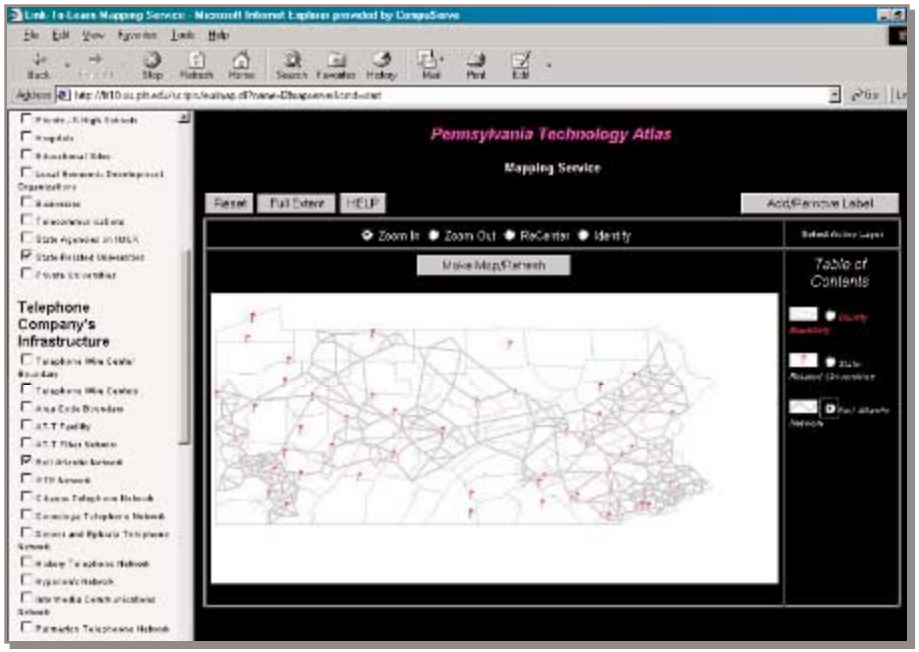
State of Minnesota: Department of Agriculture
http://www.mda.state.mn.us/risksurvey/

- Minnesota provides a relatively simple database allowing the user to search for risk management education providers. Farmers or groups of farmers that are interested in obtaining information on risk management use the program to select providers.

- The user selects a district, topic, and format, and the system generates a list of education providers, including contact information and a ranking of their expertise.

State of Pennsylvania: Technology Atlas
http://www.oit.state.pa.us/atlas/default.htm

- The State of Pennsylvania has developed a unique mapping database system. The technology atlas allows the user to create customized maps showing the availability of technological resources in the state. The atlas contains more than 400 million bytes of information. There are 58 types of information that the user can choose to show on a custom-made map, including video-conferencing sites, Internet service providers, schools and universities, and fiber-optic lines.



- The purpose of the site is to allow employers, schools, utilities, and others access to information that will assist them in expanding or meeting their technology needs.

- The user selects the information they would like to view, and the program generates a map with those items displayed. The user can zoom in on the map to focus on a particular county or region of the state.

Online courses and exams

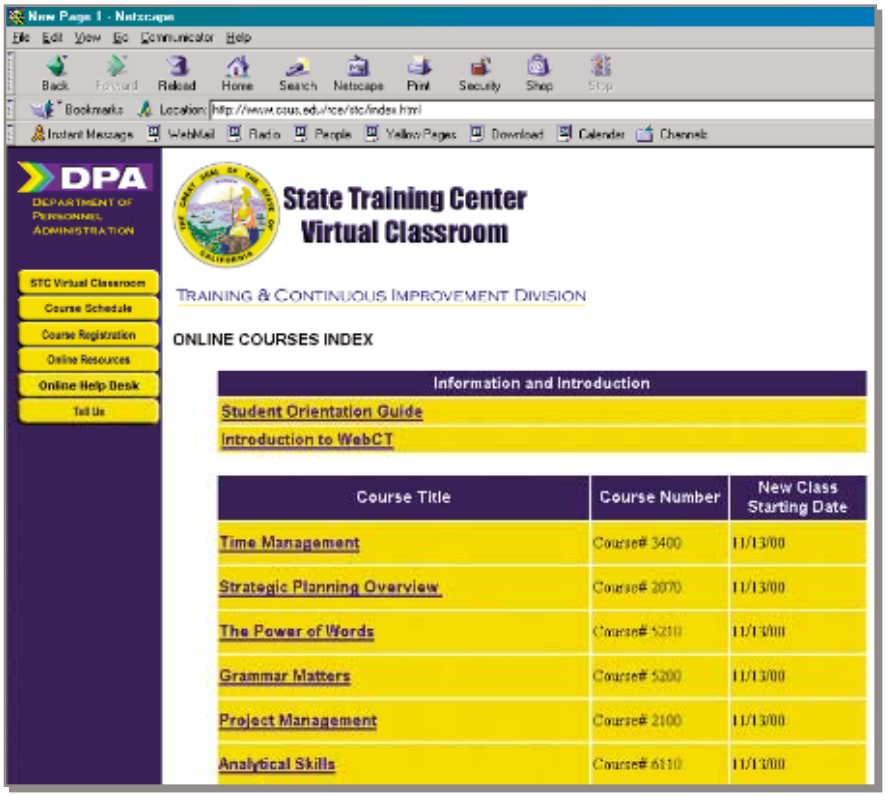
State of California: Department of Personnel State Training Center - Virtual Classroom
http://www.dpa.ca.gov/tcid/stc/virtual/virtual1.shtm

- The STC virtual classroom offers instructor-facilitated courses online. Each course is designed specifically for government employees with easy navigation and technical help available seven days a week.

- Courses include time management, strategic planning overview, project management, legislative process/bill analysis.

- When users register, they receive a confirmation letter with their assigned user name, password, and the Internet site address for the class.

- The STC believes that web-based training offers a greater degree of flexibility and accessibility than a traditional classroom experience. The user can log onto the course anytime and anywhere they have access to an internet connection. The STC virtual classroom offers courses that are instructor-facilitated. There are specific course "start" and "end" dates, but the user is not required to be on-line at the same time as the instructor or other participants in the class in order to communicate with them. There is a strong dialogue component via web-based conferencing in which the instructor and students exchange information with each other.



State of California: Cooperative Personnel Services (CPS) Examination Services
http://www.cps.ca.gov

- The CPS, formerly a state agency, is a self-supporting Joint Powers Authority. It was created to help public employers develop and enhance personnel programs, including human resource services, testing, and recruiting. This agency offers both computerized and Internet testing services.

- The CPS offers Internet testing to applicants wishing to recertify under the State of Florida's accounting requirements. The CPS mails 12,000 packets with the test booklet, a Scantron answer sheet, and return envelope, plus a PIN number and URL address, allowing the accountant to take the test on the Internet or on paper.

- The State of Florida does not require that the test be proctored, and the test is open book. The State's goal is to determine that the accountant is up-to-date on new regulations. If they fail, they can take the test again. A small percent of applicants fail the first time they take this test.

- One of the key features of the Florida test is the Web page CPS created for the State. The state agency can enter a license number, and the system immediately brings up that person's score, allowing instant access to the results. The system is user friendly, and has received positive reviews from end-users.

- The applicant also receives their results immediately.

- The CPS also provides computerized testing for other exams, including the childhood lead poisoning exam. Like pesticide applicators, in this instance it is important to verify that the person taking the test is the one receiving the license. The state offers a written test once a month at either a northern or southern location. However, if someone wants to take the test sooner, they may pay a higher fee ($115 vs. $80) and take the test at a "laser grade" and CAT testing location (there are sites statewide). This allows the user to take the test in a controlled (proctored) environment.

- The CPS has found advantages and disadvantages of providing instant exam results at a testing center. If someone fails a test, they may become upset or embarrassed, and in some cases have become aggressive towards the test proctor. In this case, opening the results at home may be better. Also, there may be cases where the testing agency would like more control, or a chance to verify the results. The Department of Insurance is implementing a computerized test. The DOI will provide instant results because they need to fingerprint the person at the time they pass the test.

- Other testing issues to consider are the "bank of questions" used on tests, which questions are given on each test, the number of test forms required, and the tendency of the candidate population to share test questions and answers.

Online courses and exams *(continued)*

State of Virginia: Department of Agriculture and Consumer Services
http://www.vipnet.org/ccc/best_practices/search.cgi?QueryText = Pesticide&submit = Search

- The State of Virginia implemented an automated testing system for commercial pesticide applicators in 1999.
- The pesticide - knowledge automated testing system (P-KATS) allows the State's 9,700 certified commercial pesticide applicators to take the required certification exams at individual testing workstations at any of 70 Department of Motor Vehicle locations statewide.
- Twenty-two different examinations have been automated, with improved graphics and instant scoring. If an applicant receives a score of 76 percent or higher, they may begin work immediately.
- This system replaces a paper-driven system in which Department of Agriculture staff were required to manually grade papers, and applicants waited for 20 days to receive scores and begin work if they passed.

PestNetwork.com
http://www.pestnetwork.com

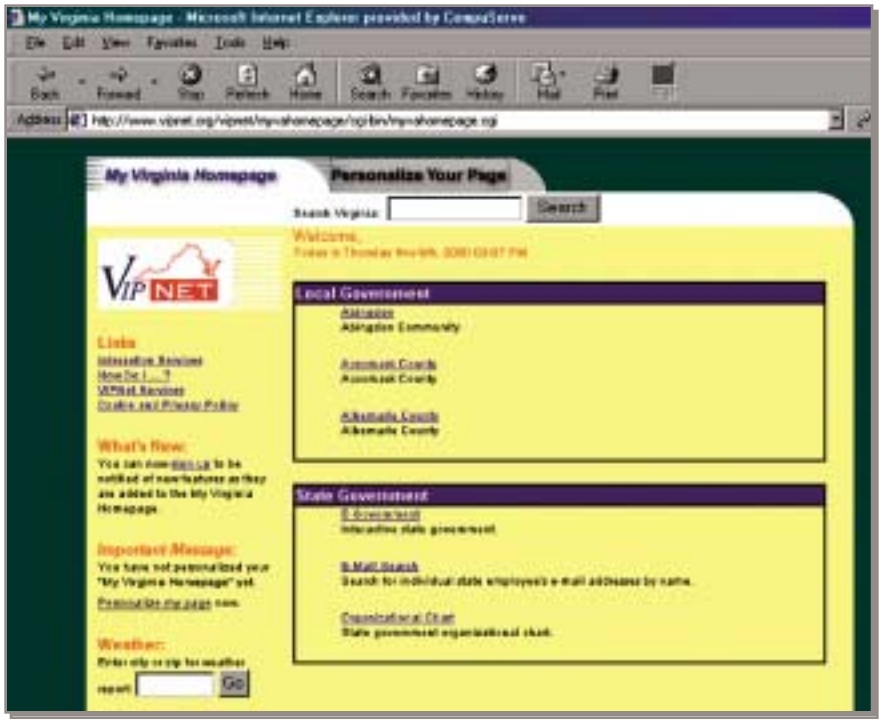
- PestNetwork.com is a private company founded in 1998. The mission of the company is "gathering, organizing, and distributing educational information, resources, and materials which are available on the Internet for use by pest control professionals, private applicators involved in agriculture, schools and other organizations involved in IPM (Integrated Pest Management), and businesses or organizations involved in the food industry."
- Online continuing education is one of the services that PestNetwork.com provides. They offer approved classes for California DPR, California Structural Pest Control Board, Texas, Tennessee, and Nevada.
- To take the required continuing education courses online, the user pays a $15 per unit fee by credit card and receives a password that allows them to access the course.

Personalized state web page

State of Virginia
http://www.vipnet.org/vipnet/myvahomepage/cgi-bin/myvahomepage.cgi

- The State of Virginia's home site allows users to personalize the page to their needs. The user selects the channels (sources of content to be displayed on the user's browser) and links to other websites they are interested in viewing. Users also can sign up for various automatic email updates and notices.

- The links may be selected down to multiple layers. For example, a user may choose local government, then select only those counties or cities for which the user wants information.



Website service portals

Several state websites and a new federal government site, http://firstgov.gov, provide a portal with direct links to online government services. State portal sites generally are designed to be the single point of contact for citizens and businesses to obtain government information, services, and direction to other state and local sites. Unlike commercial portals, state portals are less a navigational directory and more content- and service-oriented. State portals also do not provide many of the customization features available on commercial services, such as individualized home pages and free e-mail. Currently, the goal of these sites are to be a primary resource and access point to government.

States have used different organizational approaches for the portal sites, as shown below.

State of California
http://www.state.ca.us

- Though California's site is still in transition, the state is planning to organize their e-government portal around life events, such as the birth of a child or opening a business.

State of Georgia
http://www.state.ga.us

- Georgia's home page provides a link to online services that provides direct access to dozens of e-government services.

State of Massachusetts
http://www.state.ma.us

- Massachusetts has a "Get things done" button, with four categories: Search databases, File/Apply/Pay, Request Information, and Download Forms.

State of Texas
http://www.texasonline.state.tx.us

- The Texas portal lists popular sites and new e-services as well as departments and programs.

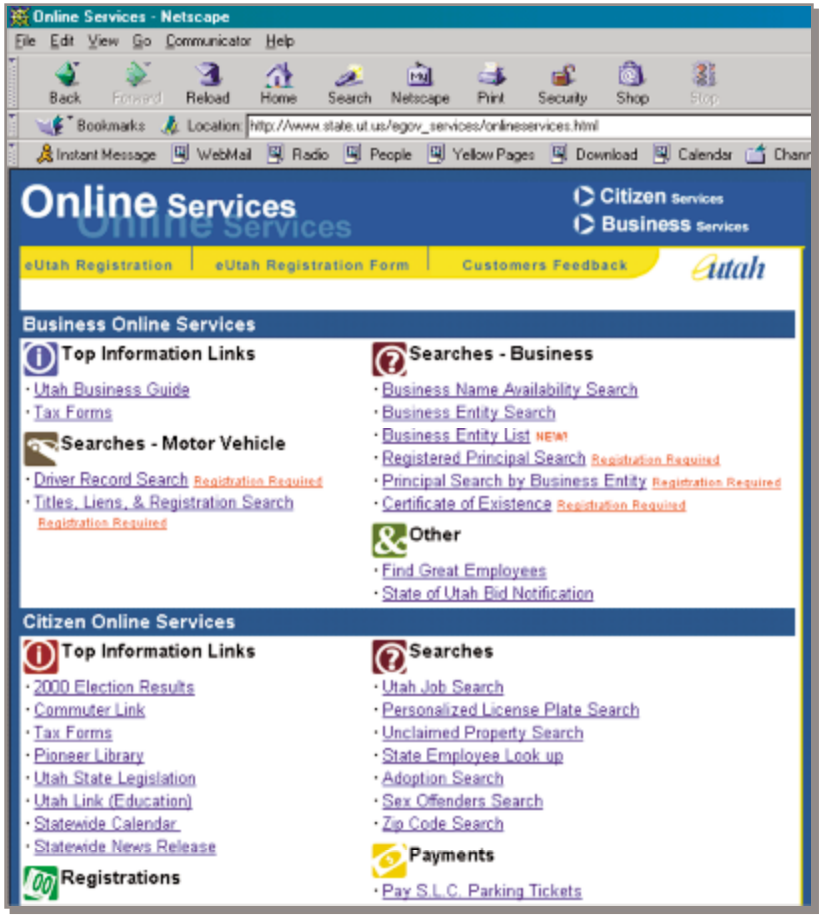
State of Washington
http://www.access.wa.gov

- Access Washington provides a portal to the State of Washington's web sites and online services. The site includes daily features and news as well as links to feature sites, public services, business, education, government, online services, employment, and an index. Washington has won the Digital State Award the last two years.

Website service portals *(continued)*

State of Utah
http://www.state.ut.us

- From the State of Utah's home page, a direct link to online services is available. These services are categorized as business and citizen online services. Citizen services are further categorized into information, registrations, licenses, enjoyment, searches, payments, and other. Business services are categorized into information, searches, and other.



State of Virginia
http://www.vipnet.org/vipnet/index.html

- The State of Virginia's online services page has fourteen categories that allow the user to link directly to a specific service. Categories include: personalized Virginia government, best practices of state agencies, consumer services, driver/motor vehicle services, career services, and professional services.
- The State has taken a lead among states in delivering information and services to citizens and businesses through the Internet. In June 1998, Virginia's Governor created the Commission on Information Technology, made up of 27 business leaders, 6 members of the Virginia legislature, 4 members of the Virginia State Government, and 1 member of the United States Congress. The commission:
  - ⇒ Developed a model Internet statute that addresses key policies and issues that are critical to e-commerce and e-government
  - ⇒ Analyzes and makes recommendations on ways to facilitate e-commerce and e-government and make the Internet accessible to all of Virginia's citizens
  - ⇒ Analyzes and makes recommendations to remove tax and regulatory barriers to facilitate greater e-commerce, and e-regulatory barriers to facilitate greater e-commerce and e-government

U.S. Federal Government
http://www.firstgov.gov

- The federal government is reorganizing the firstgov.gov portal site over time. Originally, the site had a government services page, but this is no longer available. The site currently provides simple and easy access to a wide variety of government information.

Information kiosks

Fairfax County, Virginia
http://www.co.fairfax.va.us/gov/dit/kiosk.htm

- The County of Fairfax, Virginia, instituted a kiosk project known as CRIS (community resident information services) in 1996. The county currently has 22 kiosks in libraries, government centers, and shopping malls, and operates a website and an integrated voice response system to serve end-users.

- The kiosks include touch screen activation, audio, a laser printer, color graphics, and other features. The CRIS provides information and services for 24 County agencies and 5 state and regional agencies. In addition to obtaining information, CRIS users can pay taxes via credit card, apply for County or school jobs, print forms and applications, pay traffic tickets, renew vehicle registration, and communicate with government agencies via telephone hookup.